

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

Four specimens—three males and one female.

6. *Eupithecia indefinata*.

Eupithecia indefinata, Snell. Tijdschr. voor Ent. xvii. p. 75, t. 5. fig. 11¹.

Hab. MEXICO, Jalapa (*M. Trujillo*).—COLOMBIA, Bogota¹.

Seven specimens from Jalapa, all females, agreeing well with Snellen's figure, except that they have the discal spot on the primaries more distinct.

7. *Eupithecia* — ?

Hab. COSTA RICA, Volcan de Irazu 6000 feet (*Rogers*).

One worn specimen of an apparently distinct species.

8. *Eupithecia orbelia*, sp. n. (Tab. LIV. fig. 26, ♂.)

Male. Primaries and secondaries uniformly brownish-grey, slightly irrorated with a few darker scales, both wings with a very faint waved submarginal line, the marginal line black, the fringe grey: head, thorax, abdomen, antennæ, and legs dark grey.—*Female* very similar to the male. Expanse $\frac{9}{10}$ inch.

Hab. MEXICO, Presidio (*Forrer*), Orizaba (*F. D. G.*, *H. H. Smith*), Jalapa (*M. Trujillo*); GUATEMALA, near the city 5000 feet (*Salvin, in mus. D.*), San Gerónimo (*Champion*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).

We figure a male captured by Mr. Godman at Orizaba in December 1887. The Panama specimen is in very bad condition, but I believe it belongs to this species.

9. *Eupithecia carellia*, sp. n. (Tab. LIV. fig. 27, ♀.)

Female. Primaries and secondaries pale fawn-colour; the primaries with two dots on the costal margin and one at the end of the cell black, and two rows of small black spots crossing from the costal to the inner margin—the first near the base, the second considerably beyond the middle,—the marginal line black, the fringe fawn-colour; the secondaries with a black spot at the end of the cell, below which a fine black line broken into dots crosses the wing from near the apex to the inner margin, the anal angle and outer margin clouded with blackish-brown, the fringe fawn-colour; the underside slightly darker than above, with all the markings less distinct: head, antennæ, thorax, and abdomen fawn-colour. Expanse 1 inch.

Hab. MEXICO, Presidio (*Forrer*).

We also have specimens of the male of this species, but they are in such poor condition that they cannot be described.

10. *Eupithecia chabora*, sp. n. (Tab. LIV. fig. 28, ♂.)

Male. Primaries and secondaries greyish-white thickly irrorated with minute brown scales, each wing with a black dot at the end of the cell, beyond which a row of small spots crosses from the costal to the inner margin, the marginal line brown, the fringe greyish; the underside very much as above, but with the costal margin and base of the primaries clouded with dusky brown: head, antennæ, thorax, abdomen, and legs pale greyish-white.—*Female* very similar to the male. Expanse $\frac{1}{2}$ inch.

BIOL. CENTR.-AMER., Heter., Vol. II., May 1893.

uu

Hab. COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, David in Chiriqui (*Champion*).

Our figure is taken from a David specimen.

11. **Eupithecia ornea**, sp. n. (Tab. LIV. fig. 29, ♂.)

Male. Primaries and secondaries pale brownish-fawn-colour, each crossed by indistinct pale lines, the primaries with two dots on the costal margin and one at the end of the cell dark brown, the marginal line of both wings brown, the fringe fawn-colour; the underside slightly paler than above: head, antennæ, thorax, abdomen, and legs brownish-fawn-colour. Expanse $\frac{6}{10}$ inch.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One specimen.

12. **Eupithecia oroba**, sp. n. (Tab. LIV. fig. 30, ♂.)

Male. Primaries and secondaries pale fawn-colour, each crossed by fine indistinct waved brown lines; the primaries with a small black dot at the end of the cell, beyond which is a dark brown streak, a brown dot close to the anal angle, and several brown spots along the outer margin and at the apex; the fringe pale fawn-colour; the underside with the markings more distinct: head, thorax, abdomen, antennæ, and legs fawn-colour.—*Female* very similar to the male. Expanse 1 inch.

Hab. MEXICO, Jalapa (*Höge, M. Trujillo*); GUATEMALA, Totonicapam 8500 to 10,500 feet, Cerro Zunil 4000 feet, Volcan de Atitlan 2500 feet, Volcan de Agua 8500 to 10,500 feet, San Gerónimo (*Champion*); PANAMA, Volcan de Chiriqui (*Ribbe, in mus. Staudinger*).

Varies slightly in size and colour, the Panama specimen in Dr. Staudinger's collection being smaller than any of the others before me. We figure an example from San Gerónimo.

13. **Eupithecia oroandes**, sp. n. (Tab. LIV. fig. 31, ♂.)

Male. Primaries and secondaries pale pinkish-brown, paler at the base; the primaries with two spots on the costal margin and a row of small spots crossing beyond the middle dark brown, a pale submarginal waved line extending from near the apex to the anal angle; the secondaries crossed about the middle by a row of dark brown spots, and with a submarginal pale line, the anal angle clouded with darker brown; the underside much as above, but with all the markings very indistinct: head, antennæ, thorax, abdomen, and legs pale brown.—*Female* slightly paler than the male. Expanse $1\frac{1}{10}$ inch.

Hab. GUATEMALA, Cubilguitz in Vera Paz, Cerro Zunil 4000 feet (*Champion*); PANAMA, Caldera 1200 feet (*Champion*).

Three specimens—one male and two females.

14. **Eupithecia cerynea**, sp. n. (Tab. LIV. fig. 32.)

Primaries and secondaries white; the primaries with the costal margin and apex streaked and mottled with blackish-grey, the anal angle clouded with greyish-black, the marginal line black, the fringe alternately grey and white; the secondaries slightly irrorated with grey scales; the underside with all the markings considerably paler and much less distinct: head, thorax, antennæ, and legs greyish-white (the abdomen wanting). Expanse 1 inch.

Hab. GUATEMALA, Purula in Vera Paz (*Champion*).

One specimen.

15. **Eupithecia oretilia**, sp. n. (Tab. LV. fig. 1.)

Primaries and secondaries pure white slightly irrorated with black scales, each wing crossed from the costal to the inner margin by a submarginal row of small black spots, and with a black dot at the end of the cell, the marginal line spotted with black, the fringe white; the underside as above: head, thorax, abdomen, antennæ, and legs white. Expanse $\frac{3}{4}$ inch.

Hab. GUATEMALA, near the city 5000 feet (*Salvin, in mus. D.*).

One specimen, wanting part of the abdomen.

16. **Eupithecia** — ?

Hab. COSTA RICA, Volcan de Irazu 6000 feet (*Rogers*).

One specimen. Apparently allied to *E. cerynea*.

17. **Eupithecia choma**, sp. n. (Tab. LV. fig. 2, ♂.)

Male. Primaries pale brown, mottled with darker brown at the apex and along the outer margin, a black spot at the end of the cell, the fringe brown; secondaries uniformly pale brown: head, antennæ, thorax, abdomen, and legs pale brown. Expanse $\frac{3}{4}$ inch.

Hab. MEXICO, Amecameca in Morelos (*F. D. G.*).

One specimen, captured in April 1888.

18. **Eupithecia pactia**, sp. n. (Tab. LV. fig. 3.)

Primaries pale brown, crossed from the costal to the inner margin by two faint darker brown lines, a row of small whitish spots extending from the apex to the anal angle, the fringe brown; secondaries pale brown, paler at the base, the fringe brown; the underside very much as above: head, antennæ, thorax, abdomen, and legs pale brown. Expanse $\frac{3}{4}$ inch.

Hab. MEXICO, Jalapa (*M. Trujillo*).

One specimen.

19. **Eupithecia (?) panda**, sp. n. (Tab. LV. fig. 4.) .

Primaries reddish-fawn-colour, crossed by very fine waved lines, a small black dot at the end of the cell; secondaries paler in colour, streaked with reddish-brown on the inner margin; the underside very much as above: head, antennæ, thorax, abdomen, and legs brown. Expanse $1\frac{1}{4}$ inch.

Hab. COSTA RICA, Volcan de Irazu 6000 feet (*Rogers*).

One specimen.

20. **Eupithecia (?) osiana**, sp. n. (Tab. LV. figg. 5, ♂; 6, ♀.)

Male. Primaries dark grey, thickly irrorated with black scales; secondaries paler, excepting along the inner margin; the fringe grey; the underside of the primaries pale grey, that of the secondaries white: head, antennæ, thorax, and abdomen dark grey.—*Female.* Primaries pale grey, crossed from the costal to the inner margin by two waved black lines—the first near the base, the second beyond the middle,—a small black streak at the end of the cell; secondaries pale grey, whitish in the cell, the inner margin and anal angle thickly irrorated with black scales; the fringe greyish-white; the underside greyish-white, with the outer margins streaky: head, antennæ, thorax, abdomen, and legs grey. Expanse, ♂ $\frac{3}{4}$, ♀ $1\frac{1}{10}$ inch.

Hab. MEXICO, Northern Sonora (*Morrison*).

I place this species in the genus *Eupithecia* with considerable doubt, the male having pectinated antennæ.

LEPIODES.

Lepiodes, Guenée, Sp. gén. des Lép. x. p. 359 (1857); Walker, Cat. xxiv. p. 1250.

Two species were placed in this genus by Guenée, one from North America and one from South Africa; the first-mentioned was unknown to Packard.

1. *Lepiodes chrodna*, sp. n. (Tab. LV. fig. 7, ♂.)

Male. Primaries and secondaries pale greyish-brown, each crossed by fine darker brown lines, the primaries with a black dot at the end of the cell and a submarginal row of small black spots extending from the apex to the anal angle, the fringe alternately grey and brown: head, antennæ, thorax, abdomen, and legs dark brown. Expanse $\frac{3}{4}$ inch.

Hab. MEXICO, Las Vigas (*coll. Schaus*).

Mr. Schaus informs me that this species is common at Las Vigas in Eastern Mexico during the month of May. I have only seen one specimen of it as yet, not in very good condition.

2. *Lepiodes* (?) *pieria*, sp. n. (Tab. LV. fig. 8.)

Primaries greyish-brown, crossed by many fine greyish-white lines, a black dot at the end of the cell, beyond which is a small white spot, a marginal waved white line extending from the apex to the anal angle; secondaries dark greyish-brown; the fringe greyish-brown; the underside dark brown, with all the lines very indistinct: head, antennæ, thorax, abdomen, and legs greyish-brown. Expanse 1 inch.

Hab. MEXICO, Jalapa (*M. Trujillo*).

One specimen.

RHOPALODES.

Rhopalodes, Guenée, Sp. gén. des Lép. x. p. 360 (1857); Walker, Cat. xxiv. p. 1251.

Three or four species of this genus are now known, all from Tropical South America; one of these we are now able to trace northwards to the State of Panama.

1. *Rhopalodes lobophoraria*.

Rhopalodes lobophoraria, Oberth. Études d'Ent. vi. p. 37, t. 10. f. 10¹.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).—COLOMBIA; ECUADOR; PERU, Tambillo¹.

The specimen before me from the State of Panama is darker on the underside than those from Colombia and Ecuador in my own collection.

LOBOPHORA.

Lobophora, Curtis, Brit. Ent. vi. t. 81 (1825); Packard, in Report of the U.S. Geol. Survey of the Territ. x. p. 179, t. 1. figg. 14, 14 *a* (neurulation).

Lobophora is represented in North America by about nine species, and two from Mexico are now somewhat doubtfully added. The genus is very widely distributed.

1. *Lobophora* (?) *orthesia*, sp. n. (Tab. LV. fig. 9, ♂.)

Male. Primaries and secondaries very pale brown, crossed by darker brown lines; the primaries with three dark brown marks on the costal margin, a black spot at the end of the cell, and a very fine white submarginal line extending from the apex to the anal angle, the marginal line spotted with black, the fringe pale brown; the secondaries crossed by two brown bands; the underside very much as above, but with all the lines more indistinct: head, thorax, and abdomen pale brown, the antennæ and legs dark brown. Expanse $1\frac{1}{4}$ inch.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Two males of this extraordinary insect were captured by Mr. Herbert Smith. The secondaries in this species are greatly reduced in size, and their shape will be best understood from our figure.

2. *Lobophora* (?) *cerevia*, sp. n. (Tab. LV. fig. 10, ♂.)

Male. Primaries and secondaries yellowish-fawn-colour; the primaries crossed from the costal to the inner margin by three fine brown lines—one near the base, the second beyond the middle, the third submarginal, the first zigzag, the second and third waved,—and with a spot on the costal margin towards the apex and a streak at the end of the cell dark brown, the fringe yellowish-fawn-colour; the secondaries with a submarginal line similar to that on the primaries; the underside very much as above: head, thorax, and abdomen yellowish-fawn-colour, the antennæ pale brown, the legs brownish-fawn-colour. Expanse $1\frac{1}{2}$ inch.

Hab. MEXICO, Jalapa (*Höge*).

One specimen.

CLEOMANTES, gen. nov.

Head small; antennæ simple; palpi with the third joint long, pointed; abdomen elongate, extending more than half its length beyond the wings; primaries long and narrow, their costal margin straight almost to the apex, where it is slightly rounded, the apex pointed, the outer margin slightly curved, the inner margin straight; secondaries long and narrow, their outer margin from the apex to the anal angle deeply dentated; hind tibiæ with two pairs of spurs.

Type *Cleomantes mœrens*, Druce.

1. *Cleomantes mœrens*, sp. n. (Tab. LV. fig. 11, ♂.)

Male. Primaries reddish-brown, darker along the costal and inner margins; secondaries brownish-black, with the anal angle and part of the outer margin creamy-white; the fringe reddish-brown; the underside very much as above: head, thorax, and abdomen reddish-brown, the terminal segments of the latter and the anal tuft creamy-white, the antennæ pale brown, the anterior and middle legs brown, the hind legs creamy-white. Expanse $1\frac{3}{10}$ inch.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*); GUATEMALA, Volcan de Atitlan 2500 feet (*Champion*).

Two specimens, both males. This insect is not like any other species known to me. We figure the example from Atoyac.

LARENTIA.

Larentia, Treitschke, Schmett. Europ. vi. 2, p. 75 (1828); Walker, Cat. xxiv. p. 1169.

Walker included eighty-four species in this genus from all parts of the world. *Larentia*, so far as we know at present, is poorly represented in Tropical America, two species only having been described from that region. We now add five species from within our limits, two of which are doubtfully placed in the genus.

1. *Larentia columella*, sp. n. (Tab. LV. figg. 12, ♂; 13, ♀.)

Male. Primaries pale brownish-fawn-colour, irrorated with white scales, with a black dot at the end of the cell, several indistinct waved whitish lines crossing near the base from the costal to the inner margin, a wide white line crossing beyond the middle, and a fine waved white submarginal line extending from the apex to the anal angle; secondaries creamy-white, the marginal line brownish-fawn-colour; the fringe greyish-brown; the underside white, very thickly irrorated with reddish-fawn-colour: head, antennæ, and thorax pale brown, the abdomen greyish-brown, the legs pale brown.—*Female* very similar to the male, but more distinctly marked, especially on the secondaries. Expanse, ♂ $1\frac{1}{4}$, ♀ $1\frac{3}{10}$ inch.

Hab. MEXICO, Milpas in Durango 5900 feet (*Forrer*), Las Vigas (*coll. Schaus*).

Two specimens; the male is contained in Mr. Schaus's collection.

2. *Larentia core*, sp. n. (Tab. LV. fig. 14, ♂.)

Male. Primaries and secondaries semihyaline-white; the primaries thickly irrorated with greyish-brown scales, and crossed beyond the middle by two waved white lines—the first slightly tinged with yellow; the secondaries with their outer half thickly irrorated with greyish-brown scales; the fringe alternately grey and white; the underside almost white: head white, the antennæ brown, the thorax and abdomen grey. Expanse $1\frac{1}{2}$ inch.

Hab. MEXICO, Las Vigas (*coll. Schaus*).

One specimen.

3. *Larentia polimela*, sp. n. (Tab. LV. fig. 15, ♂.)

Male. Primaries very pale greyish-fawn-colour, the secondaries a little paler in colour; the primaries crossed about the middle by a wide darker band which extends from the costal to the inner margin, and with a small black dot at the end of the cell, and a very faint submarginal greyish line; the fringe pale grey: head, antennæ, thorax, and abdomen greyish-brown, the underside of the abdomen greyish-white. Expanse $1\frac{1}{2}$ inch.

Hab. MEXICO, Amecameca in Morelos (*F. D. G.*), Las Vigas (*coll. Schaus*).

Mr. Godman captured eight males of this insect in April 1888; the female is unknown to me.

4. **Larentia (?) conica**, sp. n. (Tab. LV. fig. 16, ♂.)

Male. Primaries reddish-fawn-colour, clouded with black beyond the middle, and with a yellowish-brown spot on the costal margin near the apex; secondaries very pale fawn-colour, darker at the apex and round the outer margin, a small black spot at the end of the cell; the fringe reddish-brown: head, antennæ, thorax, and abdomen brown, the legs dark brown. Expanse $1\frac{1}{2}$ inch.

Hab. MEXICO, Las Vigas (*coll. Schaus*).

One worn specimen. I place this species in the genus *Larentia* with considerable doubt.

5. **Larentia (?) plautilla**, sp. n. (Tab. LV. fig. 17, ♂.)

Male. Primaries and secondaries pale brown; the primaries crossed from the costal to the inner margin by two fine waved dark brown lines—the first nearest the base, the second beyond the middle,—and with a small black dot at the end of the cell; the secondaries crossed about the middle by a very faint brown line; the fringe brown; the underside paler than above, entirely without markings: head, antennæ, thorax, abdomen, and legs pale brown. Expanse $1\frac{1}{2}$ inch.

Hab. GUATEMALA (*Conradt, in mus. Staudinger*).

One specimen.

HETERUSIA.

Heterusia, Geyer, in Hübner's Zutr. Samml. exot. Schmett. iv. p. 7, figg. 603, 604 (1832).

Scordylia, Guenée, Sp. gén. des Léop. x. p. 383 (1857); Walker, Cat. xxiv. p. 1274.

Walker, in his Catalogue, included seventeen species in this exclusively Tropical American genus, and many others have since been added by various authors. It is represented in our region by ten species, one of which I have described as new. Guenée and Walker apparently overlooked Hübner's name, as it is not mentioned by either of them.

1. **Heterusia atalantata**.

Scordylia atalantata, Guen. Sp. gén. des Léop. x. p. 383¹; Walk. Cat. xxiv. p. 1275²; Snell. Tijdschr. voor Ent. xvii. p. 79³.

Hab. MEXICO, Ciudad Victoria in Tamaulipas (*Richardson*), Orizaba (*H. J. Elwes*), Atóyac in Vera Cruz, Venta de Zopilote in Guerrero (*H. H. Smith*); GUATEMALA (*Conradt, in mus. Staudinger*), San Gerónimo and Panima in Vera Paz (*Champion*); COSTA RICA (*Van Patten, mus. D.*).—COLOMBIA, Bogota²; VENEZUELA²; BRAZIL^{1 2}.

The numerous specimens of this species before me show considerable variation in the length and width of the black streak on the secondaries.

2. **Heterusia salvini**.

Scordylia salvini, Butl. Ann. & Mag. Nat. Hist. ser. 4, xv. p. 341 (1875)¹.

Heterusia dividata, Snell. Tijdschr. voor Ent. xxi. p. 148, t. 8. figg. 11-13 (1878)².

Hab. COSTA RICA, Caché, Volcan de Irazu 6000 to 7000 feet, San Francisco 4500 feet (*Rogers*); PANAMA, Chiriqui (*Arcé, in mus. D.; Ribbe*), Volcan de Chiriqui 2000 to 3000 feet (*Champion*), Veragua (*Salvin*¹).—PERU².

Not uncommon in Costa Rica and the State of Panama.

3. *Heterusia partitata*.

Scordyia partitata, Guen. Sp. gén. des Léop. x. p. 384¹; Walk. Cat. xxiv. p. 1275².

Scordyia perfectaria, Walk. Cat. xxiv. p. 1277³.

Heterusia caesarea, Feld. & Rogenh. Reise der Novara, Lep. t. 130. figg. 9, 9 a⁴.

Hab. MEXICO (*Sallé*³), Xucumanatlan 7000 feet, and Omilteme 8000 feet, both in Guerrero (*H. H. Smith*), Coatepec (*Brooks*), Jalapa (*M. Trujillo, Höge*), Orizaba (*H. J. Elwes*), Atoyac (*Hedemann*⁴), Cuernavaca (*Bilimek*⁴); GUATEMALA, Chiacam, San Gerónimo, and Purula in Vera Paz, Dueñas, Calderas, Cerro Zunil 4000 to 6000 feet (*Champion*), Volcan de Santa Maria, Pacific Slope (*Richardson*); COSTA RICA (*Van Patten, in mus. D.*), Volcan de Irazu 6000 to 7000 feet, Rio Sucio, San Francisco 4500 feet (*Rogers*); PANAMA, Chiriqui (*Ribbe*), Volcan de Chiriqui 3000 to 4000 feet (*Champion*).—VENEZUELA²; BRAZIL^{1 2 4}.

A common species in our region. I have a very large series before me, showing great variation in colour—from bright chrome-yellow to almost white. Costa Rican specimens are generally paler than those from elsewhere.

4. *Heterusia basilata*.

Scordyia basilata, Guen. Sp. gén. des Léop. x. p. 385, Phalén. t. 14. fig. 3¹.

Scordyia conduplicaria, Walk. Cat. xxiv. p. 1276 (nec Hübn.)².

Hab. COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Chiriqui (*Ribbe*), Volcan de Chiriqui 2000 to 3000 feet (*Champion*), Veragua (*Arcé, in mus. D.*).—COLOMBIA; ECUADOR; BRAZIL¹, Rio Janeiro².

I consider *H. basilata* (Guen.), of which I have a very large series before me, to be quite distinct from *H. conduplicaria*, Hübn., with which species Walker has placed it. *H. basilata* is a much whiter insect.

5. *Heterusia anicata*.

Heterusia anicata, Feld. & Rogenh. Reise der Novara, Lep. t. 130. figg. 13, 13 a (♂)¹.

Hab. MEXICO, Jalapa (*M. Trujillo*), Las Vigas (*coll. Schaus*); GUATEMALA, Dueñas (*Champion*).—COLOMBIA, Bogota; ECUADOR.

I have only seen four specimens of this insect from within our limits; but from Ecuador I have a good series.

6. *Heterusia mortipax*.

Scordylia mortipax, Butl. & Druce, Cist. Ent. i. p. 118¹; Butl. Lep. Exot. p. 178, t. 61. fig. 18².

Hab. GUATEMALA, San Gerónimo (*Champion*); COSTA RICA, Cartago (*Van Patten*^{1 2}), Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Chiriqui (*Ribbe, in mus. Staudinger*).—ECUADOR.

A small species allied to *H. anicata*, Feld. & Rogenh. We have only received two specimens from our region.

7. *Heterusia discordata*.

Scordylia discordata, Guen. Sp. gén. des Lép. x. p. 384¹; Walk. Cat. xxiv. p. 1275².

Heterusia luteoradiata, Thierry-Mieg, Le Nat. 1892, p. 236³.

Hab. MEXICO, Sierra Madre de Tepic (*Richardson*), Jalapa (*M. Trujillo, coll. Schaus*); COSTA RICA³, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Chiriqui (*Ribbe, in mus. Staudinger*).—COLOMBIA; BOLIVIA³; PERU; BRAZIL, Rio Janeiro; CHILI, Valparaiso^{1 2}.

Some male specimens of this species have a yellow streak down the middle of the hind wing.

8. *Heterusia clustimena*, sp. n. (Tab. LV. figg. 18, 19, ♂.)

Primaries and secondaries bright chrome-yellow; the primaries with the apex broadly black, and a wide black band crossing beyond the middle from the costal to the outer margin; the secondaries with a wide black streak extending down the wing from near the base to the apex, the outer margin bordered with black, which is deeply dentate on the inner side near the anal angle; the fringe greyish; the underside of the primaries very much as above, but with the apex and outer margin reddish-brown slightly irrorated with yellow scales, that of the secondaries chrome-yellow, very thickly irrorated with reddish-brown scales, especially at the apex and round the outer margin: head, thorax, and abdomen yellow, the antennæ black, the legs yellow, the tarsi banded with black. Expanse 1 $\frac{3}{4}$ inch.

Hab. MEXICO, Coatepec (*Brooks*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).

This species is very distinct from all others of the genus known to me; in the colour and markings of the underside it comes nearest to *H. anicata*, Feld. & Rogenh.

9. *Heterusia metagrapharia*.

Emplocia (?) *metagrapharia*, Walk. Cat. xxv. p. 1473¹.

Heterusia (?) *cænonympha*, Feld. & Rogenh. Reise der Novara, Lep. t. 130. figg. 4, 4a (♂)².

Hab. MEXICO (*Bilimek*²), Oaxaca (*Sallé*¹).

Apparently a very rare species. We have not received a specimen of it.

10. *Heterusia v-album*. (Tab. LV. figg. 20, 21.)

Scordylia v-album, Thierry-Mieg, Le Nat. 1892, p. 216¹.

Hab. GUATEMALA¹, Totonicapam 8500 to 10,500 feet, Quiché Mountains 7000 to 9000 feet (*Champion*).

Mr. Champion captured a very large series of specimens of this species, which show a considerable amount of variation in the size of the yellow marking on the primaries, and also in the distinctness of the white lines on the underside of the secondaries.

According to Mr. Champion, this insect is very abundant along the summit of the Cordillera in Guatemala. It flies by day, frequenting damp sandy spots by the roadside, where it congregates in large numbers.

OBILA.

Obila, Walker, Char. of undescribed Lep. Het. p. 61 (1869).

Walker placed this genus in the Larentiidæ, without giving any indication as to its affinities. It is quite unknown to me.

1. *Obila dispar*.

Obila dispar, Walk. Char. of undescribed Lep. Het. p. 61¹.

Hab. HONDURAS, Limas¹.

PHIBALAPTERYX.

Phibalapteryx, Stephens, Nomencl. Brit. Ins. p. 44 (1829); Guenée, Sp. gén. des Léop. x. p. 431; Walker, Cat. xxv. p. 1332; Packard, in Report of the U.S. Geol. Survey of the Territ. x. p. 168, t. 1. fig. 12 (neurulation).

1. *Phibalapteryx intestinata*.

Phibalapteryx intestinata, Guen. Sp. gén. des Léop. x. p. 432¹; Walk. Cat. xxv. p. 1337²; Pack. in Report of the U.S. Geol. Survey of the Territ. x. p. 170, t. 9. fig. 13³.

Hab. NORTH AMERICA, Canada^{1 2} and United States^{2 3}.—MEXICO, Presidio de Mazatlan (*Forrer*), Dos Arroyos 1000 feet, and Rio Papagaio 1200 feet, both in Guerrero (*H. H. Smith*), Jalapa (*Höge*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*), Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Apparently a common species in Mexico, but becoming rarer southwards. The specimen received from Dr. Staudinger is labelled "*Camptogramma balteolata*, Herr.-Schäff.;" I am unable to find that this name has ever been published.

2. *Phibalapteryx effluata*.

Phibalapteryx effluata, Snell. Tijdschr. voor Ent. xvii. p. 89, t. 6. fig. 10¹.

Hab. GUATEMALA, Cerro Zunil 4000 feet (*Champion*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—COLOMBIA¹; ECUADOR.

We have only received a few specimens of this species.

PHILEREME.

Philereme, Hübner, Verz. bek. Schmett. p. 330 (1816); Packard, in Report of the U.S. Geol. Survey of the Territ. x. p. 174, t. 1. fig. 13 (neuration).

Very closely allied to the preceding genus, *Phibalapteryx*.

1. *Philereme albosignata*.

Scotosia albosignata, Pack. Fifth Ann. Rep. Peab. Acad. Sci. p. 61¹.

Philereme albosignata, Pack. in Report of the U.S. Geol. Survey of the Territ. x. p. 174, t. 9. fig. 14².

Hab. NORTH AMERICA, Southern States^{1 2}.—MEXICO, Coatepec (*coll. Schaus*).—BERMUDA I.²

One specimen.

2. *Philereme californiata*.

Scotosia californiata, Pack. Proc. Bost. Soc. Nat. Hist. xiii. p. 399¹; xvi. p. 40, t. 1. fig. 12².

Philereme californiata, Pack. in Report of the U.S. Geol. Survey of the Territ. x. p. 175, t. 9. fig. 15³.

Hab. NORTH AMERICA, California^{1 3}, Sanzalito³.—MEXICO, Rinconada in Vera Cruz (*coll. Schaus*).

One specimen, very similar to Packard's figures^{2 3}.

SCOTOSIA.

Scotosia, Stephens, Illustr. Brit. Ent., Haust. iii. p. 259 (1829).

This genus is represented in our region by one species, which has an exceedingly wide range. *Scotosia* can at once be distinguished from the allied genera by the silky tuft of hair on the inner margin of secondaries in the males.

1. *Scotosia affirmata*.

Scotosia affirmata, Guen. Sp. gén. des Lép. x. p. 447, Phalén. t. 9. fig. 21¹; Walk. Cat. xxv. p. 1348²; Snell. Tijdschr. voor Ent. xvii. p. 93³; Feld. & Rogenh. Reise der Novara, Lep. t. 131. fig. 37⁴.

Scotosia dubiferata, Walk. Cat. xxv. p. 1349⁵.

Hab. MEXICO, Cordova (*Rümelí*), Jalapa (*coll. Schaus, M. Trujillo*), Coatepec (*Brooks*); GUATEMALA (*Conradt, in mus. Staudinger*), San Gerónimo and Purula in Vera Paz, Zapote, Pantaleon (*Champion*); PANAMA, Chiriqui (*Arcé, in mus. D.; Ribbe, in mus. Staudinger*), Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—COLOMBIA, Bogota^{3 4 5}; ECUADOR; PERU; BRAZIL^{1 2}, Rio Janeiro; ARGENTINE REPUBLIC.

The specimen figured by Felder and Rogenhofer⁴ does not quite agree with Walker's type of *S. dubiferata*, but is certainly inseparable from *S. affirmata*, Guen. I very much doubt if the var. *bicolor*, Feld. & Rogenh. (*op. cit.* t. 131. fig. 38), from Colombia and Brazil, is conspecific with it.

PTEROCYPHA.

Pterocypha, Herrich-Schäffer, Samml. aussereur. Schmett. pp. 50, 65 (1850-58) ; Walker, Cat. xxv. p. 1365.

This genus is represented in our country by five species, not one of which appears to be common. *Pterocypha* is probably confined to Tropical America.

1. *Pterocypha gibbosaria*.

Pterocypha gibbosaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 65, 82, t. 63. figg. 353, 354¹.

Scotosia gibbosaria, Guen. Sp. gén. des Léop. x. p. 442²; Walk. Cat. xxv. p. 1369³.

Hab. PANAMA, Chiriqui (*Arcé, in mus. D.*).—BRAZIL^{1 2 3}.

One specimen, sent many years ago by Arcé, is the only authority we have for including this insect in our fauna.

2. *Pterocypha floccosaria*.

Scotosia floccosaria, Walk. Cat. xxxv. p. 1685¹.

Hab. MEXICO, Paso de San Juan in Vera Cruz (*coll. Schaus*).—COLOMBIA, Bogota¹; ECUADOR; PERU; ARGENTINE REPUBLIC.

The Mexican specimen before me is almost identical with Walker's type, now in my own collection, except that the band crossing the primaries is rather darker.

P. floccosaria differs from all the allied species by its very black underside.

3. *Pterocypha umbrinata*.

Scotosia umbrinata, Guen. Sp. gén. des Léop. x. p. 443, Phalén. t. 10. fig. 2¹; Walk. Cat. xxv. p. 1350².

Hab. MEXICO, Cuesta de Misantla (*M. Trujillo*), Coatepec (*Brooks*), Cordova (*Rümeli*), Jalapa (*coll. Schaus*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).—COLOMBIA²; ECUADOR; BRAZIL^{1 2}.

In some specimens of this species the brown band crossing the primaries is much darker than in others, the dark form coming very close to the var. *velutina*, Oberth.

4. *Pterocypha delineata*.

Pterocypha delineata, Walk. Cat. xxv. p. 1367¹.

? *Pterocypha pannosata*, Guen. Sp. gén. des Léop. x. p. 442²; Walk. Cat. xxv. p. 1366³.

Hab. MEXICO, Durango city (*Becker*), Presidio de Mazatlan (*Forrer*), Mexico city (*Höge*), Jalapa (*M. Trujillo*), Coatepec (*coll. Schaus; Brooks*), Cordova (*Rümeli*); HONDURAS (*Wittkugel, in mus. Staudinger*).—ANTILLES, Haiti², San Domingo^{1 3}.

This species varies greatly in the colour of the bands crossing the primaries: in some specimens they are white, in others pale brown, and in others again dark brown.

5. *Pterocypha cometes*, sp. n. (Tab. LV. fig. 22.)

Primaries pale brownish-fawn-colour, with a greenish shade along the costal margin, apex, and outer margin, and with a brown line crossing near the base, several narrow brown lines beyond it crossing from the costal to the inner margin, a very fine waved white line crossing beyond the middle, and a marginal row of small white spots extending from the apex to the anal angle, the marginal line black, the fringe greyish-brown; secondaries brownish-fawn-colour, crossed beyond the middle from the costal to the inner margin by three faint waved lines; the underside pale greyish-brown, the outer margins of both wings broadly bordered with black, inside which are several narrow black lines, a rather large black spot at the end of the cell on the primaries: head and thorax greenish-fawn-colour, the antennæ, abdomen, and legs brownish-fawn-colour. Expanse $1\frac{3}{4}$ inch.

Hab. MEXICO, Presidio de Mazatlan (*Forrer*), Paso de San Juan in Vera Cruz (*coll. Schaus*); GUATEMALA, Volcan de Santa Maria, Pacific Slope (*Richardson*), Volcan de Atitlan 2500 to 3500 feet (*Champion*).

Varies considerably in colour and in the distinctness of the lines crossing the wings. We figure Mr. Schaus's specimen, it being in much fresher condition than any of ours.

ISCHNOPTERYX.

Ischnopterix, Hübner, Verz. bek. Schmett. p. 332 (1816).

Syrtodes, Guenée, Sp. gén. des Lép. x. p. 451; Walker, Cat. xxv. p. 1372.

Walker in his Catalogue included eight species in this genus, and others have since been added by Felder and Rogenhofer and Möschler. Eight species are here enumerated from Central America, half of which are described as new. *Ischnopteryx* is probably confined to Tropical America.

1. *Ischnopteryx chlorata*.

Ischnopteris chlorata, Hübn. Samml. exot. Schmett. t. 222. figg. 1-4¹.

Syrtodes chlorata, Guen. Sp. gén. des Lép. x. p. 453²; Walk. Cat. xxv. p. 1374³.

Ischnopteryx pexatata, Möschl. Verh. zool.-bot. Ges. Wien, 1881, p. 412, t. 18. fig. 24⁴.

Hab. MEXICO, Jalapa (*Höge, M. Trujillo*), Coatepec (*coll. Schaus, Brooks*); PANAMA, Chiriqui (*Ribbe; Trötsch, in mus. Staudinger*), Bugaba, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).—COLOMBIA; GUIANA, Surinam⁴.

Apparently the commonest species of the genus. The females vary to a considerable extent, scarcely two specimens being alike; the male also varies greatly in size. A specimen from Chiriqui in Dr. Staudinger's collection is the smallest I have seen.

2. *Ischnopteryx bryifera*.

Syrtodes bryifera, Feld. & Rogenh. Reise der Novara, Lep. t. 131. fig. 28 (♀)¹.

Hab. MEXICO, Jalapa, Paso de San Juan (*coll. Schaus*); NICARAGUA, Chontales (*Belt*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).—GUIANA¹.

The male of this insect is very similar to the female; it is easily distinguished from the same sex of *I. chlorata*, Hübn., by its longer and more angular hind wings.

3. *Ischnopteryx rostellaria*.

Syrctodes (?) *rostellaria*, Feld. & Rogenh. Reise der Novara, Lep. t. 125. fig. 1 (♀)¹.

Hab. MEXICO¹, Jalapa, Coatepec, Paso de San Juan (*coll. Schaus*); GUATEMALA, San Gerónimo (*Champion*); COSTA RICA (*Van Patten*), Volcan de Irazu 6000 to 7000 feet (*Rogers*).

There are two forms of the female of this species: one like that figured by Felder and Rogenhofer¹, and another without the white on the primaries, the latter resembling the male in colour.

4. *Ischnopteryx velledata*.

Ischnopteryx velledata, Möschl. Verh. zool.-bot. Ges. Wien, 1881, p. 413, t. 18. fig. 25¹.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*). — GUIANA, Surinam¹.

Two males have been received from Chiriqui. This species will probably have to be removed from *Ischnopteryx* when we know the two sexes. The shape of the hind wing in the male is very different from that of any species of the genus known to me.

5. *Ischnopteryx chryses*, sp. n. (Tab. LV. figg. 23, 24, ♂; 25, ♀.)

Male. Primaries dark sage-green, thickly irrorated with brown scales, and crossed from the costal to the inner margin by two zigzag, fine, reddish-brown lines, a fine waved submarginal white line extending from the costal margin to the anal angle and two small black streaks on the inner margin about the middle, the marginal line black, the fringe brown; secondaries black, broadly bordered with yellow at the apex; the underside of the primaries chrome-yellow, crossed from the costal to the inner margin by two black bands—the first near the base, quite narrow, the second very broad and beyond the middle,—and with the apex and fringe fawn-colour, that of the secondaries yellow, with the inner half dusky black, and a black band crossing the wing from the costal to the outer margin where it is widest: head, thorax, and upperside of the abdomen sage-green, the antennæ brown, the underside of the abdomen and the legs fawn-colour.—*Female*. Primaries dark reddish-brown, with the costal and outer margins and the apex pale greenish-brown, the white line not so distinct as in the male. Expanse, ♂ ♀, 1 $\frac{3}{4}$ inch.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*), Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

A very distinct species, not closely allied to any other known to me. We figure a pair from the Volcan de Chiriqui.

6. *Ischnopteryx canopus*, sp. n. (Tab. LV. figg. 26, 27, ♂.)

Male. Primaries dark brown, irrorated with green scales, crossed near the base from the costal to the inner margin by a green line edged with black, beyond which a black line crosses the wing, a dark brown spot on the costal margin near the apex, below which are three small dark brown spots, a fine white line partly crossing beyond the middle, the marginal line spotted with black, the fringe dark brown; secondaries brownish-black, with the apical portion bright orange-yellow; the underside of the primaries yellow, crossed about the middle from the costal to the inner margin by a rather wide black band, the inner margin from the base to the black band dark grey, a large oval black spot near the apex,

the apex greenish-fawn-colour,—that of the secondaries pale yellow, shaded with reddish-brown, and thickly irrorated with dark brown scales, crossed beyond the middle by an indistinct black waved line: head, thorax, and abdomen dark brown above, reddish-brown beneath, the antennæ dark brown, the legs reddish-brown. Expanse $2\frac{1}{10}$ inches.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).

Allied to *I. chryses*.

7. *Ischnopteryx* (?) *aristophilides*, sp. n. (Tab. LV. fig. 28, ♂.)

Male. Primaries dark brown, with the outer margin broadly bordered with greyish-brown, three spots near the apex and one close to the anal angle dark brown, the marginal line black, the fringe dark brown; secondaries pale brown, paler at the base and along the inner margin; the underside uniformly pale brown, the primaries with a whitish mark near the anal angle, both wings with a fine, waved, white marginal line: head, thorax, and antennæ dark brown, the abdomen and legs paler.—*Female.* Very similar to the male, but without the greyish-brown border to the primaries. Expanse $2\frac{1}{10}$ inches.

Hab. COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

I place this species in the genus *Ischnopteryx* with considerable doubt.

8. *Ischnopteryx* (?) *polymenes*, sp. n. (Tab. LV. fig. 29, ♂.)

Male. Primaries dark brown, crossed from the costal to the inner margin by two darker brown waved lines—the first near the base, the second beyond the middle,—with a dark brown spot at the end of the cell, and a marginal row of small brownish-white spots extending from the apex to the anal angle, the fringe dark brown; secondaries greyish-brown, crossed beyond the middle from the costal to the inner margin by a faint waved brown line; the underside uniformly pale brown, the end of each vein yellowish-white: head, antennæ, thorax, abdomen, and legs dark brown.—*Female.* Very similar to the male. Expanse $1\frac{3}{4}$ inch.

Hab. COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Allied to the preceding species, *I. aristophilides*, but very distinct from it in both sexes.

SPARGANIA.

Spargania, Guenée, Sp. gén. des Léop. x. p. 454 (1857); Walker, Cat. xxv. p. 1375.

1. *Spargania tesserulata*.

Spargania tesserulata, Feld. & Rogenh. Reise der Novara, Lep. t. 131. figg. 39, 39 a (♂)¹.

Spargania longipalpata, Thierry-Mieg, Le Nat. 1892, p. 262 (♂)².

Hab. MEXICO, Jalapa (*F. D. G., Höge; coll. Schaus*), Coatepec (*Brooks; coll. Schaus*); GUATEMALA, San Gerónimo, Purula (*Champion*); COSTA RICA, Rio Sucio (*Rogers*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).—COLOMBIA, Bogota¹; PERU².

With a large series of specimens before me I am unable to consider *S. longipalpata*, Thierry-Mieg, a distinct species. These specimens vary considerably as regards the dark markings on the primaries, and also in the extent of the white on the secondaries, one Panama example having the secondaries almost entirely black, excepting the two

white spots near the apex. Specimens from Bogota in my own collection are equally variable.

HAMMAPTERA.

Hammaptera, Herrich-Schäffer, Samml. aussereur. Schmett. pp. 52, 66 (1850-58).

The type of this genus is *H. probataria*, Herr.-Schäff., merged in *Cidaria* by Guenée.

1. *Hammaptera probataria*.

Hammaptera probataria, Herr.-Schäff. Samml. aussereur. Schmett. p. 66, figg. 404, 405¹.

Cidaria probataria, Guen. Sp. gén. des Léop. x. p. 459²; Walk. Cat. xxv. p. 1392³.

Hab. MEXICO, Jalapa (*Höge*, *M. Trujillo*), Cordova (*Rümelí*), Coatepec (*Brooks & coll. Schaus*), Orizaba, Amecameca (*F. D. G.*); GUATEMALA, San Gerónimo, Panajachel (*Champion*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet, Rio Sucio (*Rogers*).—VENEZUELA^{1 2 3}.

A very variable species.

2. *Hammaptera perturbata*.

Pterocypha perturbata, Walk. Cat. xxv. p. 1367¹.

Hab. MEXICO, Coatepec (*coll. Schaus*).—ANTILLES, San Domingo¹.

One specimen in Mr. Schaus's collection, almost identical with Walker's type in the National Museum.

3. *Hammaptera coras*, sp. n. (Tab. LVI. fig. 2.)

Primaries sage-green, crossed in the middle from the costal to the inner margin by a wide brown band, on either side of which are several fine waved dark brown lines, the fringe greenish-brown; secondaries pale fawn-colour, crossed below the middle by an indistinct waved line, the base and inner portion clouded with blackish-brown, the fringe fawn-colour: head and thorax dark green, the abdomen pale brown. Expanse 1½ inch.

Hab. COSTA RICA, Rio Sucio (*Rogers*).

One specimen.

4. *Hammaptera chloridata*.

Cidaria (Hammaptera) chloridata, Feld. & Rogenh. Reise der Novara, Lep. t. 132. fig. 18 (♂)¹.

Hab. MEXICO, Jalapa (*Höge*), Cordova (*Rümelí*), Cuesta de Misantla (*M. Trujillo*); GUATEMALA, Cerro Zunil, San Gerónimo (*Champion*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—VENEZUELA¹.

I have a good series of specimens before me from within our limits, but they all are paler in colour than Felder and Rogenhofer's figure; it is probable they have faded.